TEMPORAL LOBE EPILEPSY PRESENTING AS DEPRESSION AND NON SPECIFIC PSYCHOTIC SYMPTOMS — A CASE REPORT

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ABSTRACT

We report on a 36 years old male who developed symptoms of depression and non specific psychotic symptoms. The initial diagnosis was considered depression with psychosis. However, clouding of consciousness and fluctuation in symptoms led us to investigate an organic explanation for the presentation. Collateral history revealed past history of epilepsy and EEG report indicated temporal lobe epilepsy. His symptoms were well controlled with Carbamazepine. This report suggests that temporal lobe epilepsy should be considered as the differential diagnosis when patients frequently present with non specific psychotic symptoms, depressive symptoms fluctuations in symptoms and conscious levels.

Key words: Temporal Lobe Epilepsy, Depression, Psychotic Symptoms.

INTRODUCTION

Temporal Lobe Epilepsy (TLE) is a syndrome characterised by simple partial and complex partial seizures[1]. In TLE patients, numerous psychiatric symptoms can occur before, after and between seizures: such as depressed mood, irritability, euphoric mood, atypical pain, insomnia, fear, and anxiety[1].

Symptoms occur when there is activation of the temporal lobe or neighbouring areas involved in seizure spread. Complex partial seizures may begin as a simple partial seizure or "aura" which can include elaborate auditory and visual hallucinations, complex changes in perception and psychic phenomenon such as *déjà vu*[2]. With the spread of discharge activity there may be automatic movements and behaviour or even a generalised seizure. These events are often followed by post-ictal confusion, tiredness and amnesia[1].

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It is not uncommon for TLE to present as an organic confusional state and may be mistaken for a florid psychosis. Depressive moods can occur as part of an aura, rarely (about 1%) and are more common in patients with TLE[3].

The epidemiology of TLE is poorly defined but partial epilepsy comprises about 50-60% of all epilepsy cases[1]. Focal epileptiform discharges are most frequently recorded over the temporal lobe and temporal lobe epilepsy is the most common epilepsy syndrome[4].

CASE HISTORY

Mr. X is a 36 year old married, martial arts instructor who was admitted to psychiatric unit October 2005.

His parents separated when Mr. X was two years old and he was brought up by his mother. He had normal child hood and enjoyed school. He made several friends. He pursued a career in business administration but later left this to be a Martial Arts Instructor. He got married and now has two children in a stable, supportive home environment. He was always sociable and interested in spirituality. He had experimented with cannabis, ecstasy and LSD in his twenties.

When he was seven years old, he fell off his bicycle and suffered a head injury with loss of consciousness. Since this accident, Mr. X has had seizures, especially in his sleep, approximately twice per week. When he was thirteen years old he was started on an Anti-Epileptic Drug. Despite good seizure control, the medications were discontinued after 1 year.

Following discontinuation of antiepileptic medications, his seizures restarted with reduced frequency

(one every six months). In the year prior to his contact with psychiatric services the seizure frequency had increased to two per month building up to three seizures in the two weeks just before his presentation.

In the year prior to assessment, he also had "funny turns" in addition to his reported seizures. During these "funny turns" he went pale, and responded to unseen stimuli. He had no recollection of these episodes. These episodes had increased in frequency leading up to his presentation. His presenting problems started about one month prior to assessment where his family noticed strange behaviour. They described him lying on the floor, being agitated and making "odd movements", laughing excessively and talking to the air.

He had felt low in mood for the last month and had been more withdrawn. This was associated with initial and middle insomnia and weight loss of one stone. He was not suicidal. His low mood also coincided with the death anniversary of his brother.

Mr. X self presented to local psychiatric services in October 2005. He was accompanied by his family. He felt anxious and had a strange feeling that "this was all a dream" with a sense of *déjà vu*. He stated that he was able to see his brother who had died last year. He was assessed by the local Crisis and Home Treatment Team. He had psychomotor agitation. His speech varied from complete mutism to being over talkative. He was elated in mood with inappropriate laughter. He was responding to unseen stimuli.

Mr. X was admitted informally to the local psychiatric unit for assessment and treatment. Physical examination was normal. In light of his symptomatology and past history of epilepsy, an urgent EEG and neurological review were arranged. EEG showed "frequent interictal epileptiform activity with focal slowing in the right temporal lobe suggestive of a focal cortical lesion in that area". MRI scan showed no structural abnormalities. Following the review by neurologists and finding of EEG, the diagnosis temporal lobe epilepsy was confirmed. He was titrated up to Carbamazepine 300 mg twice daily. He made significant improvement with complete resolution of his psychiatric symptoms. He went back to his normal functioning life. He remained well on Carbamazepine and subsequent EEG report was normal.

DISCUSSION

Psychiatric symptoms are commonly associated with epilepsy, especially simple and complex partial seizures. These symptoms may occur during the periictal, ictal or interictal stages of epilepsy. The complex partial seizures originating in the temporal lobe are often preceded by an aura (simple partial seizure). The aura lasts for a few seconds and may take the form of hallucinations of smell, taste, vision, hearing or bodily sensation. The ictal phase usually lasts for up to one or two minutes. During this phase the patient may appear to be out of touch with his surrounding and may show automatisms. The presentation of complex partial seizures is typically pleomorphic. It can manifest with altered levels of consciousness, may lead to disturbance in perceptions, disturbance of speech, psychomotor changes, for example, grimacing or complex stereotypes behaviours.

Table 1 shows the key features seen in TLE. The presenting features of this case comprised of Mr. X having a strange feeling that "this was all a dream", a sense of *déjà vu*, displaying inappropriate laughter with hallucinations and changes to his affective state. This is very suggestive of an aura or simple partial symptoms seen in TLE as outlined in Table 1. The dreamy state in temporal lobe epilepsy may be associated with affective and psychotic symptoms[5]. Mr. X also displayed "strange behaviour" and "odd movements" as described by his family. These are consistent with the automatisms seen in the complex partial seizures of TLE.

His withdrawn behaviour and lack of communication raised doubts of depression as his presentation was also correlated with the death anniversary of his brother. However, it is now clear that his depressive symptoms were part of TLE. Depression is a commonly reported psychiatric complication of TLE[6]. Interictal depression occurs in one third of TLE patients[1]. Epilepsy is also associated with a dysphoric disorder that is characterised by affective symptoms: brief episodes of depressed or euphoric mood, irritability, insomnia, anxiety and fears[4].

Behavioural disturbances are associated with epilepsy. Transient confusional states may occur during simple and complex partial seizures and after seizures. It is reported that non-convulsive seizures may continue for days or even weeks. An abnormal mental state may be manifestation of this condition[7]. The diagnosis is easily overlooked[8].

Mr. X had a right sided temporal lobe focus. Right temporal lobe seizures are more often associated with auras, automatisms, well formed ictal speech and a rapid return to baseline compared to left temporal lobe seizures[9]. These features were very prominent in our patient's case.

Partial seizure disorders, such as TLE, often stem from focal lesions. The most common lesion has been found in the mesial temporal lobe with hippocampal sclerosis (on post surgical resection)[1]. This is not always identifiable on neuroimaging studies which may account for Mr. X's normal MRI result. Head trauma is a risk factor for this lesion[10]. Mr. X has a history of head injury in his childhood.

Mr. X responded well to Carbamazepine but there are other therapeutic options available should his condition deteriorate or become refractory or intolerable. For the majority of TLE patients, medications are the mainstay of treatment. Approximately 50% of patients respond to maximally tolerated doses of a single drug[1].

Table 1

Key features of TLE

Premonitory (hours or days before seizure)	1. Affective: depression, irritability, aggression 2. Cognitive: confusion, amnesia 3. Somatic: headache, appetite changes
Simple Partial Seizures: **Aura**	1. Sensory: illusions, hallucinations in olfactory, auditory, visual or gustatory modes 2. Autonomic: abdominal discomfort, chest sensation, palpitations, piloerection 3. Affective: depression, fear, anxiety, elation, laughing, crying, religious or sexual feeling 4. Cognitive/experiential: confusion, altered familiarity (*déjà vu, jamais vu*), dreamy state, depersonalization, forced thoughts, distortion of time or body image
Complex Partial Symptoms	1. Impaired consciousness: blank stare, arrest of ongoing behaviour 2. Automatisms: lip smacking, swallowing, repetitive movements of hands, repetitive phrases 3. Dystonic posturing of extremity, usually the hand
Postictal	1. headache 2. Affective: depression, mania, aggression 3. Cognitive: confusion, amnesia, anomia and aphasia 4. Psychosis
Interictal	1. Affective (as described above) 2. Cognitive: amnesia, anomia, psychomotor slowing, impaired executive and social functions 3. Sexual: reduced libido, impotence, anorgasmia 4. Personality: circumstantiality, humourlessness, hypermoralism, obsessionalism, paranoia, religiosity 5. Psychosis

If the first drug does not control seizures fully, another trial of monotherapy or combination therapy can be used. When seizures become medically refractory or when seizures or drug adverse effects interfere with the patient's quality of life, epilepsy surgery is often considered. Those with temporal lobe foci are good candidates and approximately 70% of TLE patients become seizure free[1].

This interesting case highlights an important clinical learning point. Patients presenting with paroxysmal, stereotyped and fluctuating clusters of symptoms with affective and perceptually abnormal features should be investigated and assessed for Epilepsy. Treatment in these patients is generally effective and can improve a patient's quality of life and level of functioning.

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